BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of Modernizing the E-rate Program for Schools and Libraries	)	WC Docket No. 13-184
Proposed Eligible Services for the E-rate Program, FY 2019	)	CC Docket No. 02-6

COMMENTS - FCC ELIGIBLE SERVICES LIST FOR FY 2019

SUMMARY

Cumberland County Schools submits these Comments in response to the Federal Communications Commission's (FCC) Public Notice released July 30, 2018 (designated DA-18-789) inviting stakeholders to comment on any aspect of the proposed Eligible Services List for FY 2019 ("ESL").

The ESL released by the FCC on July 30, 2018 is continuing to scale back on products and services that are eligible for E-Rate funding. Cumberland County Schools in North Carolina is requesting that the FCC add items to the list, specifically in the Data Protection area.

BACKGROUND

Cumberland County Schools serves 51,000 students in 87 facilities in North Carolina and is the fifth largest district in the state. The Cumberland County Board of Education is proud of the system's 6,807 employees and is fully committed to empowering all students to collaborate, compete, and succeed in an increasingly interconnected world.

Cumberland County Schools uses their E-Rate funds in the most cost-effective manner possible. The district has increased the Internet access and wireless usage of the classrooms specifically through the E-Rate funding over the last six years.

Lightning is one of the oldest observed natural phenomena on earth. It can be seen in volcanic eruptions, extremely intense forest fires, surface nuclear detonations, heavy snowstorms, in large hurricanes, and obviously, thunderstorms. (1)

The North Carolina coastal area, near where the district is located, is susceptible to severe weather such as hurricanes, tornadoes, and thunderstorms, all of which cause lightning strikes. Having all of the district facilities connected as one network, the most cost-effective method of delivering service to the schools, means that there are many possibilities for interconnected devices to be damaged because of lightning strikes.

NEED FOR DATA PROTECTION PRODUCT EXPANSION

The CCS network is complex and comprised of many devices, such as switches, routers, and wireless equipment, all of which are vital to the educational delivery of the school district. CCS has invested millions of dollars in their communications and networking systems in order to ensure seamless access of the Internet and delivery of educational content to the classrooms through their network.

An absolutely critical and indispensable component for the CCS network is reliable surge and lightning suppression. A single bolt of lightning, carrying up to 100 million volts of electricity (and in some cases up to 1 billion volts) (1), carries enough explosive power to rip through roofs, combust brick walls and thoroughly destroy networking and communications equipment. The damage usually isn't limited to a direct lightning strike – indirect strikes on telephone, data and power lines can be equally catastrophic. (2)

Lightning strikes have happened many times to the Cumberland County Schools' facilities. Within the last couple of years CCS has lost over 250 networking devices representing more than $260,000.00 in equipment to lightning strikes and subsequent electrical surges.

By implementing relatively low-cost surge and lightning protectors in their network, CCS is protecting their (and the E-Rate funded) investment of the original network equipment purchase.

Wear and tear from frequent surges can degrade devices over time, reducing their lifespan. In addition to protecting investments, proactive surge protection can act as other preventative measure would—incurring a smaller cost initially (such as a surge protector sacrificing to prevent surge damage) to avoid the much larger expense of damaged or destroyed equipment. As surges are impossible to predict (like lightning strikes) and can cause massive damage to any device on a power grid or IP network, surge protection is essential to reduce these risks. (3)

The use of surge suppression products to protect sensitive equipment from lightning hits and surges on Ethernet data lines has become more important than ever with the advent of faster standards. The faster data speeds have required equipment manufacturers to use fragile high-speed components. The need to keep cost low has meant the Ethernet interfaces are now integrated onto the main PCB assembly, designs with minimal part count and the use of low cost (lower power) components. A surge that would have left an older 10Base-T interface untouched, could easily destroy a sensitive 100/1000Base-T interface. In the past, if a 10BaseT interface was damaged, it was easily replaced at minimal cost. With modern equipment having integrated 100/1000Base-T interfaces, this is not the case anymore. The motherboard, or more likely the entire piece of equipment, usually needs to be replaced. The risk of not using an external surge protector on the network is higher than ever. (2) The cost of replacing equipment is a burden placed solely on the district and its local budget.

To help protect the investment made by the district through local funds and E-Rate funding, the district is requesting that the FCC add surge protection and suppression products as eligible for E-Rate funding.

CONCLUSION

The FCC would not be creating a new functionality of eligible products by the addition of surge suppression, as Data Protection is already a standard (via Uninterrupted Power Supply products) considered eligible for funding. Products that provide surge suppression for network devices would simply be an extension of the Data Protection items already eligible for funding. The products and services needed to ensure the protection of connectivity to the Internet for students and educators have become a necessity to ensure broadband connectivity within schools, and should be funded by the program.

Cumberland County Schools respectfully requests that the Wireline Competition Bureau to consider this recommendation and incorporate these products into the final version of the FY 2019 Eligible Services List.

Respectfully submitted
on behalf of Cumberland County Schools

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